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Social Safety Nets, Economic Freedom and Public Policy

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Social Safety Nets, Economic Freedom and Public Policy

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Abstract

What is the relationship between social welfare, safety nets and economic freedom? Arguably, if economic freedom (EF) promotes growth and if it trickles down EF promotes larger freedoms (e.g. a healthy and productive life, free from want and deprivation). However, higher EF by definition entails lower government interventions in sectors such as provision of safety nets, health and education, thereby curtailing some aspects of larger freedoms. Thus ambiguity exists with respect to the effect of EF on larger freedoms. Given that developing countries account for many poor, have malnourished children, face a decline in per capita availability of food grains, with a sharp rise in farmer's suicide (for instance in India), providing safety nets is essential for enhancing larger freedoms. However, with the initiation of economic reforms favouring market oriented policies, the role of the government in investment decisions has diminished.

The econometric analysis suggests that higher levels of EF promote not only higher levels of GDP per capita but also impact larger freedoms favourably. However, results also confirm that higher levels of EF associated with few of its sub-components, particularly *lower government consumption expenditures* and *lower transfers and subsidies*, affect larger freedoms adversely. Since the role of the State in creating and expanding social opportunities, and in mitigating risks and vulnerability from the broader perspective of human freedoms is well documented, a policy dilemma exists regarding the appropriate level of EF. In light of this dilemma, and acknowledging that public action expands larger freedoms, the paper questions the commonly held belief that government interventions are necessarily less productive.

Keywords
Economic freedom, safety nets, human development, income inequality, deprivation, public intervention

JEL: I30, I38, O43

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Social Safety Nets, Economic Freedom and Public Policy

Although there is a broad consensus that renewed economic growth is a necessary condition for meeting the MDGs, it is also widely accepted that growth alone is insufficient and that more direct public action is required (World Bank 1990, 1997; Sahn and Stifel 2000; Haddad et al. 2003). In order for growth to become a sufficient condition, three interdependent policy requirements have been identified.

1. First, growth needs to be broad based, that is, more intensive in labor and agriculture so as to benefit the poor.
2. Second, the asset base of poor households (in particular, their access to education and health services) needs to be strengthened so that they can participate in the growth process.
3. Third, short-term public transfers are required to protect and increase the consumption of the poorest households until they participate in benefits from increased growth through more productive employment opportunities.

To achieve these policy conditions, public spending policy, in particular, plays a crucial role. However, it is not just the scale of government spending that matters, but also where and how public expenditures are allocated and used. The World Bank (1997) identifies five fundamental tasks of government as:

1. establishing a foundation of law,
2. maintaining a non-distortionary policy environment and macroeconomic stability,
3. protecting the environment,
4. investing in basic social services such as education and health, and,
5. protecting the vulnerable[1].

The last two tasks specifically emerge in the light of the fact that more than 1 billion people around the globe still live on less than USD 1 a day as measured in purchasing power parity in 2001. Over the past 20 years, rapid economic growth in East Asia has reduced the total number of poor people from 800 million in 1981 to 270 million in 2001. In South Asia, during the same period the total number of poor people declined only marginally, from 480 million to 430 million. However, poverty rates did not fall in Africa, Latin America and the Middle East. In fact, the number of the poor in Sub Saharan Africa has almost doubled, from 160 million in 1981 to more than 300 million in 2001 (Chen and Ravallion 2004). Using the poverty line measured at USD 2 per day, the world's total poor increased from 2.5 billion in 1981 to more than 2.7 billion in 2001, and the associated poverty rate fell from 67 per percent to 53 percent. It is obvious, therefore, that a "business as usual" approach is wholly inadequate. Instead, a more effective poverty alleviation strategy is urgently required in recognition of the fact that persistent poverty and malnutrition result in irreversible costs to human and economic development.

[1] See also Stiglitz (2000) for a similar perspective.

1. Rationale for Government Intervention

Any credible evaluation of the levels and composition of public expenditures must start with a clear understanding of the underlying rationale or motivation for government intervention. The answers to the questions regarding when, where, and how governments should intervene depend sensitively on the perspective from which one approaches the issue. For our purposes, it is useful to separate the existing perspectives into two categories: the *welfarist approach*[2] and the *social justice approach*.

Arguably the most influential, the welfarist approach identifies two motivations for government intervention. First, governments should intervene to address market failures and bring about a more efficient allocation of scarce resources. And second, governments should intervene to improve the distribution of resources and reduce poverty. The sources of market failure typically identified in the literature are the absence of competitive markets, the existence of positive or negative externalities in consumption and production, the undersupply of public goods by the market, imperfect information on production and consumption opportunities, missing or imperfect markets, and coordination failures (Atkinson and Stiglitz 1980; Stern 1989; Hoff and Stiglitz 2001). Economic theory also provides guidance on the range of policy instruments that could be used to address these market failures and to reduce poverty, as well as on the likely trade-offs between equity and efficiency inherent in each[3].

The social justice approach involves justifying government intervention based on various concepts of social justice. Two such approaches that have gained prominence over the past three decades are the *basic needs approach* and the capabilities approach[4]. Both of these distinguish between income as a "means" or an "end," and they often highlight the lack of correlation between income and other outcomes that enter into one's concept of development. State intervention is therefore often justified by appealing to some concept of a just society, defined in terms of people's right to access some basic needs or capabilities. Intervention is justified when market forces fail to ensure such

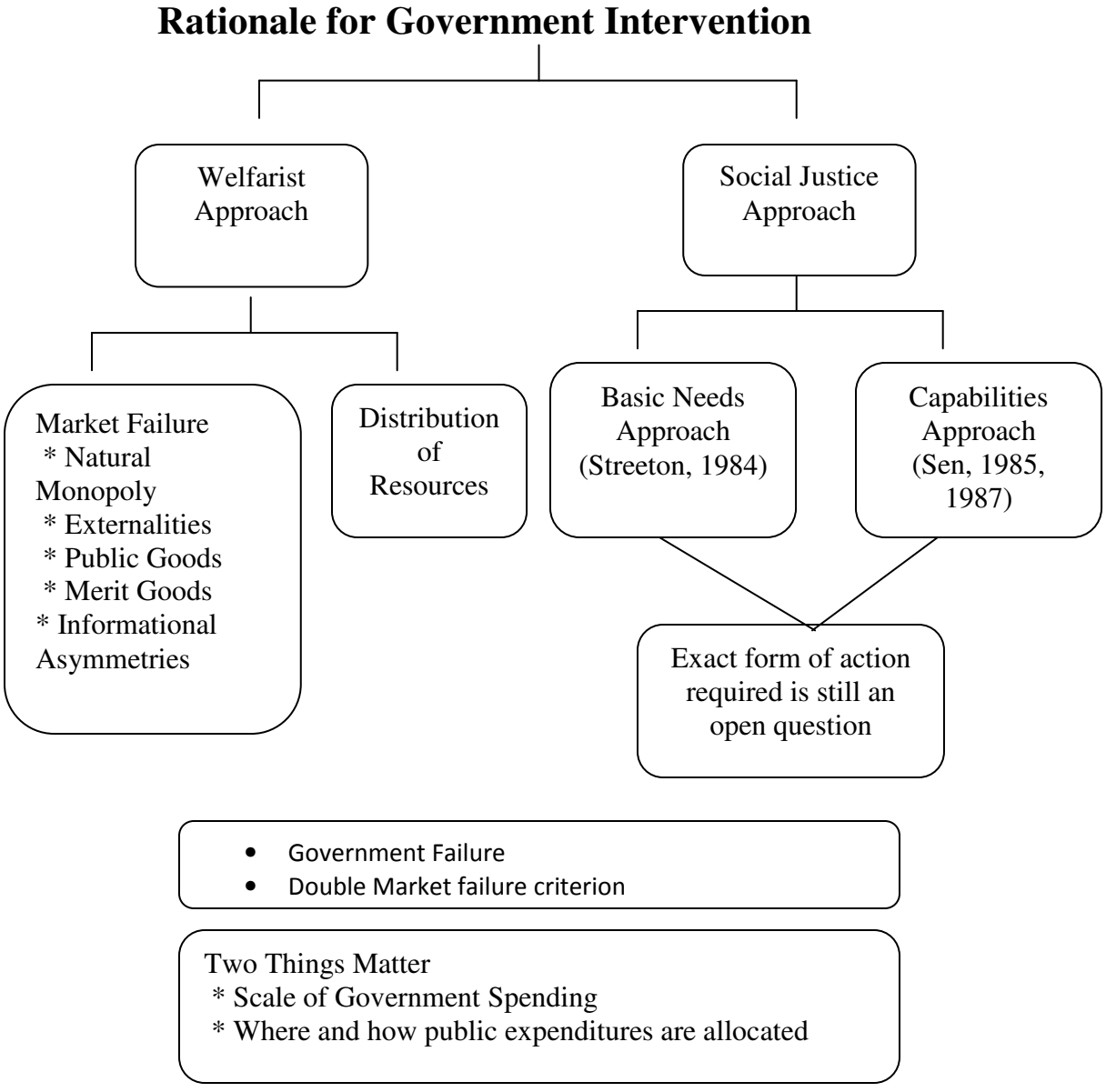
[2] But welfarist theory also recognizes that what governments can achieve is limited by information and administrative constraints, both of which must be understood in order to determine whether and how to intervene. For example, where firms or individuals have more information on the costs and benefits of their decisions, theory suggests that decentralized market-based instruments are preferable.

[3] It is also important to recognize that equity-efficiency trade-offs are not always present. Where market failures are more pervasive among the poor (for example, where the poor are poor because they are disproportionately affected by market failures), "win-win" possibilities arise, where government intervention leads to both a more efficient and a more equitable allocation of resources. Poverty itself may be the source of the market failure, for example, where lack of access to credit and the absence of savings prevent poor households from accumulating income-generating assets. In this case, the poor are caught in a "poverty trap" that gives rise to persistent poverty. Strategies for alleviating poverty that address both the market failure and the resource constraints dimensions of persistent poverty may thus give rise to a self_reinforcing "virtuous cycle" whereby public policy enables the poor to pull themselves out of poverty through their own actions (Hoff 1994; Banerjee 2001; Ravallion 2002).

[4] Also note that under both of the social justice approaches considered the exact form of action required is still an open question and, from this perspective, the insights from the welfarist approach may therefore still be valid.

access. The "freedom to choose" is also often considered an important dimension of a just society. Libertarians tend to focus more on preventing the government from restricting free choice than on the equally important role of government in promoting such freedoms. These freedoms constitute an important component of individual "capabilities" (that is, the capability of turning "means," such as income, into "ends," such as health and nutrition status), as discussed by Sen (1992).

Figure 1: Rationale for Government intervention



The basic needs approach typically focuses on human needs in terms of specific commodities such as health, food, education, water, shelter, and transport (Streeten 1984). Proponents of this approach argue that, because of the public-good characteristics of these (and other) sectors, the private sector will not supply adequately. This is particularly true in areas that are rural or sparsely populated, which are characteristics often synonymous with poverty. The focus on public-good characteristics clearly introduces a strong overlap with the welfarist approach. The capabilities approach views income as a means to the purchasing of goods and services that are valued not only for the utility derived directly from their consumption, but also because they expand one's capability to function as a valued member of society (Sen 1985, 1987).What matters is not only one's actual achievements but also one's potential to achieve.

Social Safety Nets

Although there has been an emerging consensus that renewed "broad-based" economic growth is a necessary condition for alleviating poverty within an acceptable time frame, in isolation it is not sufficient (World Bank 1997). In particular, it is now widely accepted that effective social safety nets are an important component of an effective poverty alleviation strategy. In fact, public safety programs are the only hope of many of the world's poor for a life free from chronic poverty, malnutrition, and disease. The importance of these transfers is magnified insofar as informal private networks (e.g., based on kinship or community) are thought to become less effective in environments that experience extensive economic and political reforms, tighter budget constraints, and increasing commercialization and urbanization.

In spite of the growing recognition of the importance of social safety nets these transfer programs often have a number of shortcomings that undermine their effectiveness.

1. First, the transfers often fail to reach the most vulnerable groups.
2. Second, transfer programs are often not very cost-effective in that much of the poverty alleviation budget is eaten up by unnecessarily large administrative costs. In addition, many programs are rife with corruption and operational inefficiencies, resulting in theft or other losses that reduce the resources available to be distributed to vulnerable households.
3. Third, social safety net programs usually have a short-term focus on alleviating poverty and thus generally fail to generate a sustained decrease in poverty independent of the transfers themselves.

Forms of Social Safety Nets

1. Food Subsidies
    - Universal Food Subsidies
    - Subsidized Ration Foods
    - Food Stamps
2. Public Works Schemes
3. Human Capital Subsidies

Food Subsidies

The expressed objectives of such subsidies have varied across countries and time, but typically include increasing the purchasing power of low-income households, reducing calorie and micronutrient deficiencies, maintaining low urban wages, and ensuring social and political stability. A *universal food subsidy* involves the government's fixing the food price below the market (or world) price, and households are free to consume as much of the food as they wish. *Subsidized rationing* of food involves the sale of a fixed amount of food at a subsidized price through publicly designated ration shops. *Food stamps* involve the transfer of a coupon of a certain monetary value to households, and this coupon can be exchanged in private outlets for certain foods at market prices up to the value of the coupon.

On the whole, *universal food subsidies* are rarely progressive. Median targeting performance is 0.93, and the cost ratio is $3.30. Such subsidies are usually seen as stopgap measures until more efficient transfer mechanisms can be developed. *Rationing* at low levels avoids inefficiencies arising from substitution effects. Focusing only on leakage to the non-poor, the median targeting performance is 1.3, and a median cost ratio of $2.40. For rationing, greater reliance on self-selection and geographic targeting is generally found to be helpful.

Public Works

One of the common criticisms of food subsidies and other cash or in-kind transfers is that their effect persists only as long as the transfer themselves persist. Such a strategy is typically seen as undesirable both in terms of the dependency culture it creates and because of the pressure it puts on public finances, thus raising concerns regarding its sustainability. Longer-term measures that address persistent poverty require policies that help poor households build up their asset base in order to promote their participation in the development process, that is, a "more developmental" approach. Public works provide one such alternative because they can have both features, with wage transfers addressing short- term poverty and the output from these projects potentially enhancing the asset base of the poor and thus helping to alleviate poverty in the medium to long run. Public works are also often perceived as an effective policy instrument for addressing vulnerability to poverty, especially when they allow households to self-select into existing programs in times of hardship or where programs are activated in areas where aggregate (as opposed to idiosyncratic) shocks occur. But some shocks (e.g., illness or disability) may preclude some households' participation in such programs, so other interventions are also required.

There can be a strong trade-off between asset creation and cost effectiveness in decreasing current poverty. Programs perform better when communities participate in selecting assets and managing the programs. Focusing on wages, median targeting performance[5] is 1.85, ranging from 1.5 to 4 for best and worst. These imply cost ratios[6] of

[5] Targeting Performance is defined as the share of transfers going to the poor divided by their population share.

$1.60, ranging from $1.5 to $2.00. Forgone earnings have been found to account for between 25 percent and 50 percent of wage transfers; using lower bound rates increases the median cost ratio to $2.18. Similarly, if nonwage costs are (a low) 20 percent of total project costs; these increase the cost ratio to $3.20. Thus certain design features can ensure that such costs are substantially reduced, including the use of low wages, good geographic targeting and selection of labour intensive projects. Such programmes are most effective in crises e.g. natural or man made disasters, where there is a need to build up community assets and a very low current demand for labour.

In spite of excellent targeting performance, this program does not appear to be a cost effective way of transferring income to the poor because of existence of i) foregone earnings and ii) non wage costs of the programme. Although one needs to factor in the output benefits accruing to the poor, these programs would appear to be very expensive ways of transferring income to the poor.

Human Capital Subsidies

These are transfers conditioned on children of the poor attending school or health clinics, which have recently become popular, again especially in Latin America. Invariably, household-level data from many developing countries show that the poorest households are poor not only in terms of income and consumption levels, but also in terms of human capital status (i.e., nutrition, health, and education). The attraction of these subsidies is that they can simultaneously address current poverty and structural poverty in the medium to long run.

[6] Cost Ratio is defined as the budget costs of getting USD 1 into the hands of the poor.

Table 1: Relative Performance of Social Safety Nets

		Median Targeting Performance*	Median Cost Ratios**	Remarks
1	Universal Food Subsidies	0.93	3.3	• Rarely progressive and often slightly regressive (i.e. performed worse than without targeting) • Seen as stopgap measures; • Impose on commodities with negative income elasticities
2	Ration Food Subsidies	1.3	2.4	• Greater reliance on self-selection; • geographic targeting; • Ration levels can be increased in response to national economic shocks
3	Public Works	1.85	3.2	• Effective way of addressing vulnerability; • Programmes should be labour intensive and use low wages; • Programmes perform better when communities participate in selecting assets
4	Human Capital Subsidies (PROGRESA in Mexico)	2.4	1.1	• Improved nutrition, health, and education status helps break the intra and intergenerational transmission of poverty; • Simultaneously addresses current poverty and structural poverty; • Preventive as well as promotional role;

*__Targeting Performance__: share of transfers going to the poor divided by their population share
**__Cost Ratios__: budget costs of getting USD 1 into the hands of the poor

2. Economic Freedom and Role of Government

Economic freedom, broadly speaking, is the freedom of the citizens from undue interference by the government. It attempts to characterize the degree to which an economy is a market economy. The main notion underlying the concept is that governments ought to do some things but should refrain from doing others. When government provides sound legal structure, which protects people and their properties, from invasion by others, it enhances economic freedom. Similar is the case when it enables its citizen's access to sound money. However, at the same time, it must refrain itself from actions which interfere with personal choice. In other words, it must have limited degree of interventionism in the form of government ownership, regulations, and taxes.

The Fraser Institute, founded in 1974, publishes the Economic Freedom of the World (EFW) Index. The EFI is a means of measuring the degree of economic freedom by including thirty-seven components divided into five groups in an index. Since 1996, data updated yearly have been published, and the data now covers the years 1970 (54 countries), 1975 (83 countries), 1980 (105 countries), 1985 (111 countries), 1990 (113 countries), 1995 (123 countries), and 2000 (123 countries), 2001 (123 countries) 2002 (123 countries), 2003 (125 countries) and 2004 (130 countries). The five major areas for which the degree of economic freedom is measured are:

- Size of Government: Expenditures, Taxes, and Enterprises
- Legal Structure and Security of Property Rights
- Access to Sound Money
- Freedom to Trade Internationally
- Regulation of Credit, Labor, and Business

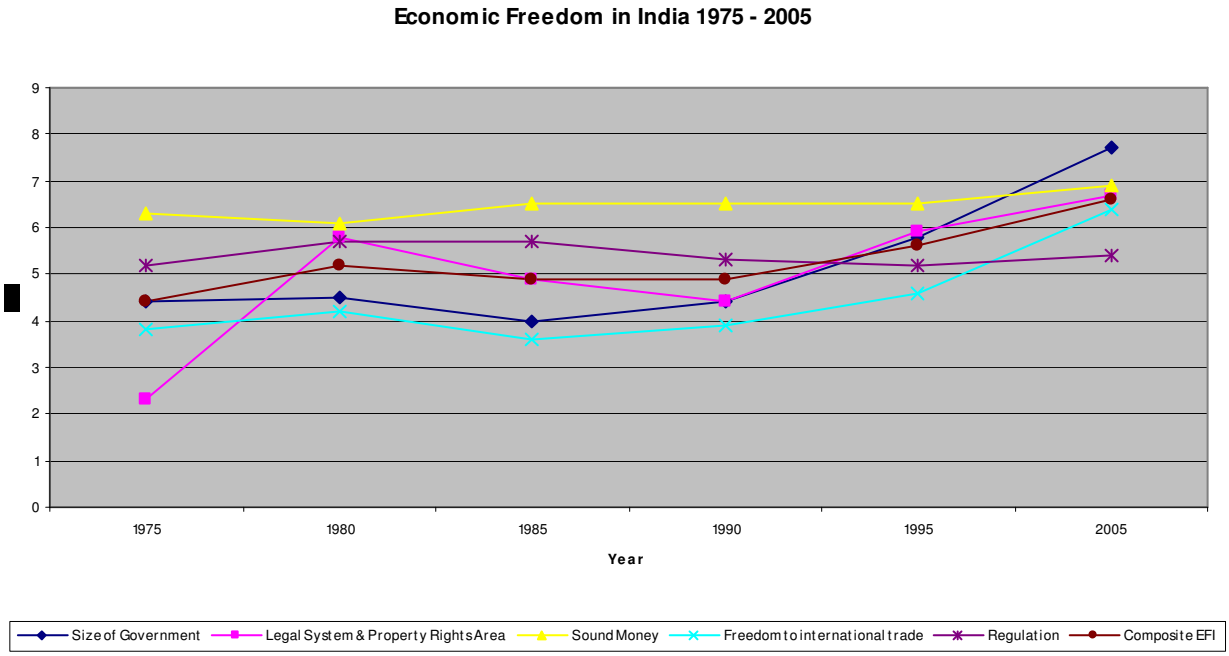
Within the five major areas various components and sub components are incorporated. Each component and subcomponent is placed on a scale from 0 (no economic freedom) to 10 (full economic freedom) that reflects the distribution of the underlying data. The component ratings within each area are averaged to derive ratings for each of the five areas. The index is calculated using arithmetic averages. In turn, the summary rating is the average of the five area ratings. The index is based completely on empirical data and does not include subjective judgment of the authors. The economic freedom of India over the period 1975 to 2005 is given in Figure 2.

For the purpose of our paper, the relevant area is *Size of Government: Expenditures, Taxes and Enterprises*. It includes the following four components:

a. General government consumption spending as a percent of total consumption.
b. Transfers and subsidies as a percent of GDP.
c. Government enterprises and investment as a percent of total investment.
d. Top marginal tax rate (and income threshold at which it applies).

When government consumption is a larger share of the total, political choice is substituted for private choice. This makes the economic freedom shrink. Similarly, when governments tax some people in order to provide transfers to others, they reduce the freedom of individuals to keep what they earn. Thus, greater the share of *transfers and subsidies* in an economy, the less is economic freedom. Therefore, countries with low levels of government spending as a share of the total, a smaller government enterprise sector, lower transfers and subsidies and lower marginal tax rates have higher economic freedom ratings.

Figure 2: India's Economic Freedom Index (1975-2005)



3. Econometric Analysis: Impact of Economic Freedom on Larger Freedoms

In addition to the economic freedom variables three other independent variables viz. size of country, population density and percentage of population living in coastal area[7] have also been included in the regressions. The percentage of population living in coastal areas controls for the influence of geography on development[8]. We now turn to a more formal consideration of these factors and focus on the roles of geography and economic freedom as determinants of larger freedoms.

3.1. Methodology and Data Sources:

Due to the non availability of time series data on coastal population, the dataset was prepared by averaging the economic freedom and larger freedoms data over the period 2003 to 2005. Data availability restricted the analysis to a set of 110 countries. Further, a dummy has been introduced for OECD and non-OECD economies with non-OECD as the default category.

[7] Specifically work by Gallup, Sachs and Mellinger (1998), shows that higher coastal population density is associated with faster growth, while higher interior population density is associated with lower growth.

[8] Leading thinkers have pointed to four major areas in which geography will play a fundamental direct role in economic productivity: transport costs, human health, agricultural productivity (including animal husbandry); and proximity and ownership of natural resources (including water, minerals, hydrocarbon deposits, etc.). The factors may also have indirect effects, if first-mover advantages or population densities affect subsequent growth dynamics through agglomeration economies or other feedback mechanisms.

Most of the data is taken from the World Development Indicators. Data on various measures of economic freedom index has been collected from the Fraser Institute's EFW, 2007. The data on coastal population, reflecting the proportion of population in 1994 within 100 km of the coastline is from the John L. Gallup, Andrew D. Mellinger, and Jeffrey D. Sachs' Geography Datasets posted on the Harvard website http://www.cid.harvard.edu/ciddata/geodata.csv

3.2 Empirical Results: Economic Freedom, Geography and Larger Freedoms[9]

The purpose of this section is to study the impact of economic freedom on larger freedoms. Larger Freedoms are captured by:

1. Human Development Index
2. Life Expectancy at Birth
3. Infant Mortality Rate
4. Poverty Headcount Ratio at USD 1 a day
5. Poverty Headcount Ratio at USD 2 a day and
6. Equality (both absolute and relative measures).

Some of these results are presented in table 2 below.

Table 2: Regression Results of Impact of Overall Measure of Economic Freedom on Larger Freedoms

Dependant variable	HDI	Life Expectancy	IMR	Poverty Hd. Ct. Ratio at $ 2	Gini Index
Explanatory Variable	Estimated Coefficient	Estimated Coefficient	Estimated Coefficient	Estimated Coefficient	Estimated Coefficient
Country Size	$1.09e^{-08}$ (2.23)**	$7.14e^{-07}$ (1.80)*	$-2.17e^{-06}$ (-1.71)*	$-5.37e^{-07}$ (-0.28)	$1.36e^{-07}$ (1.87)*
Population Density	0.0000154 (1.11)	0.001 (0.98)	-0.003 -(0.71)	0.108 (2.14)***	-0.033 (-1.75)*
Coastal population	0.1027 (2.88)***	12.168 (4.23)***	-26.284 (-2.91)***	-12.39 (-0.82)	9.85 (1.69)
EF Summary Index	0.058 (3.97)***	2.79 (2.37)***	-12.611 (-2.91)***	-14.60 (-2.35)**	-1.51 (-0.63)
D Oecd	0.1765 (5.87)***	10.39 (4.28)***	-24.10 (-3.10)***	-11.16 (-0.49)	1.09 (0.12)
Constant	0.2588 (2.98)***	39.50 (5.63)***	139.84 (6.14)***	119.11 (3.14)***	51.36 (3.52)***
Adjusted R Square	0.55	0.49	0.386	0.326	0.073
No. of Observations	110	110	109	31	31
Prob > F	0.00	0.00	0.00	0.0094	0.2349

[9] The section is based on Kaur (2008).

t statistics are in parenthesis

* Significant at the 10 percent level, ** significant at 5 percent level and ***significant at 1 percent level.

The regressions presented in Table 2 show that higher the level of EFI for a country the higher is the Human Development Index (HDI) and the Life Expectancy at Birth for that country. Results also show that the Infant Mortality rate is lower for countries with higher EFI. Similar results hold for the effect of coastal population on HDI, Life Expectancy at Birth and Infant Mortality Rate. However, the regression results show that both the EFI and the percentage of population living in coastal areas have a non-significant effect on other measures of larger freedoms such as poverty and income inequality.

3.3 Size of Government and Larger Freedoms

As a next step we sub-divide the aggregate measure of EFI into five sub groups of the index and study how size of government affects larger freedoms. The desegregation of the EFI measure into one of its sub-components viz. *government consumption expenditure* reveals few interesting results (Refer Table 3). In particular the results show that higher the Economic Freedom Index as measured by *lower government consumption expenditure:*

- Lower is the Human Development Index
- Higher is the Infant Mortality Rate
- Higher is the Poverty Head Count Ratio and
- Higher are the income inequalities as measured by the Gini coefficients.

Thus increases in economic freedom, particularly as measured by lower 'government consumption expenditure' is detrimental for larger freedoms[10]. This result has interesting policy implications that are addressed in the next section. A synoptic view of the contrasting effect of EF (Summary Index) and EF (measured by government consumption expenditure) on larger freedoms is shown in Figure 3. The figure clearly shows that while EF (Summary Index) affects larger freedoms favourably, EF (measured by government consumption expenditure) affects these parameters adversely.

[10] All these results are significant at the 1 percent level.

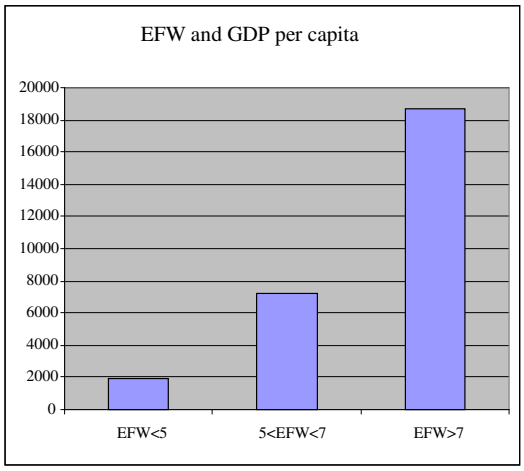
Table 3: Regression Results of Impact of Economic Freedom as Measured by Government Expenditure on Larger Freedoms

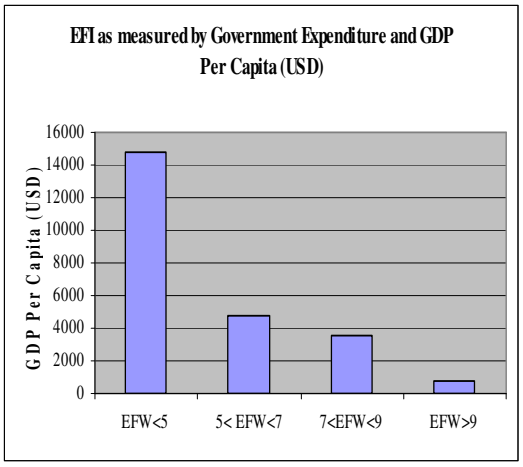
Dependant variable	HDI	Life Expectancy	IMR	Poverty Hd. Ct. Ratio at $ 2	Gini Index
Explanatory Variable	Estimated Coefficient	Estimated Coefficient	Estimated Coefficient	Estimated Coefficient	Estimated Coefficient
Country Size	$8.95e^{-09}$ (1.81)*	$6.69e^{-07}$ (1.65)	$-1.81e^{-06}$ (-1.40)	$2.38e^{-06}$ (1.24)	$2.27e^{-06}$ (3.27)***
Population Density	0.000025 (1.86)*	0.0015 (1.40)	-0.0026 (-0.52)	0.078 (1.60)	-0.05 (-2.88)***
Coastal population	0.1409 (4.26)***	14.26 (5.24)***	-35.91 (-4.14)***	-35.20 (-3.08)***	6.95 (1.69)
EF Government Expenditure	-0.0230 (-4.09)***	-0.708 (-1.53)	4.19 (2.83)***	9.82 (3.29)***	3.24 (3.02)***
D Oecd	0.1955 (6.99)***	11.94 (5.19)***	-29.60 (-4.04)***	-29.98 (-1.45)	-3.63 (-0.47)
Constant	0.751 (17.25)***	60.47 (16.88)***	38.12 (3.32)***	29.32 (1.07)	22.01 (3.02)***
Adjusted R Square	0.559	0.432	0.3989	0.5215	0.3091
No. of Observations	110	110	109	31	31
Prob > F	0.00	0.00	00.00	0.0016	0.0123

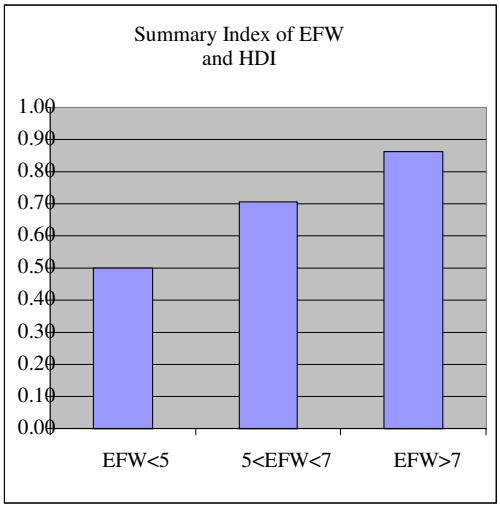
t statistics are in parenthesis

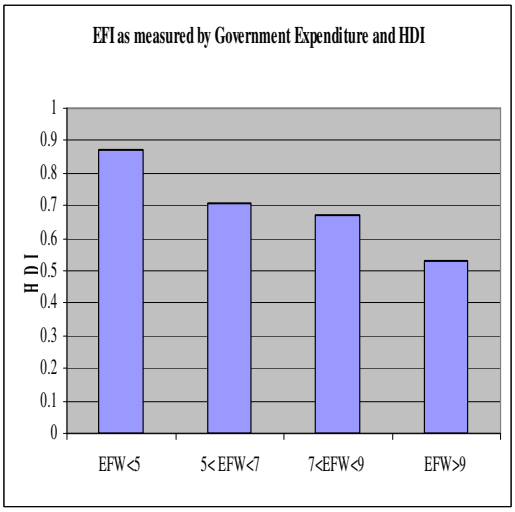
* Significant at the 10 percent level, ** significant at 5 percent level and ***significant at 1 percent level.

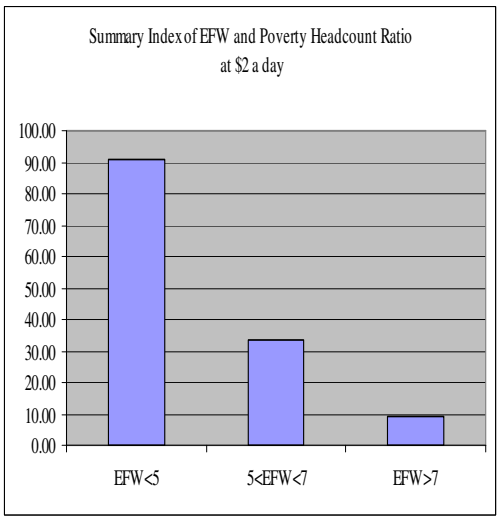
Figure 3: Synoptic View of Contrasting Impacts of Summary Index of EF and EF measured by Government Expenditure on Larger Freedoms

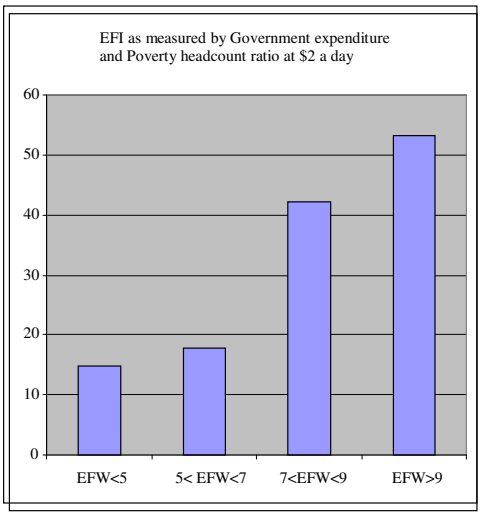












4. India's Social Development

Indians constitute about 17 per cent of world population. But we account for about 35 per cent of the poor and 40 per cent of the illiterates in the world. There are more poor and illiterates today than at the time of independence sixty years ago. Our infant mortality is still about 60 per 1000 live births, which is one of the highest in the world. More than 50 per cent of Indian women and children are anaemic due to acute nutritional deficiency. India also experiences a high incidence of morbidity and mortality on account of various waterborne diseases, tuberculosis, diabetes, etc.

4.1. Poverty

During the period 1983 to 2004-2005 the share of the poor in the population at the national level came down from 45 to 28 per cent. However, in terms of absolute numbers the decline was only marginal from 324 million to 315 millions. While all the major States experienced reduction in the percentage of the poor to varying degrees, five major States (three of these belong to BIMARU) experienced increase in the number of poor during this period. These are Bihar (from 46.4 to 50.5 million), Madhya Pradesh (from 27.3 to 33.0 million), Maharashtra (from 28.5 to 31.7 million), Orissa (from 16.2 to 18.4 million) and Uttar Pradesh (from 55.2 to 63.9 million).

The estimates of poverty produced on the basis of the 55^{th} round published in February 2001, showed a marked reduction in the headcount poverty measure, which fell from 37.1 (percentage of poor below the poverty line) in 1993-94 to 26.8 per cent in 1999-2000 for rural households, while among the urban households the index fell from 32.9 per cent in 1993-94 to 24.1 per cent in 1999-2000 (Deaton and Dreze 2002).

This official poverty line in India is, however, woefully unsatisfactory. Apart from factoring in about 650 grams of food grains every day, the line makes little provision for the other essentials of life such as health, shelter and clothing. The average Indian does not have access to these basic needs. Such conditions point to the absurdity of India's aspiration of joining the league of developed nations by 2020. In fact, it would not be an exaggeration to call the current poverty line a "starvation line" because that is exactly what it is. Considering that people below this official line cannot even afford the requisite amount of food grains, they are more than just poor; they are starving. If Vision 2020 of a developed India is to become a reality, a proper definition of poverty is vital. By that time, the State needs to ensure that every citizen not only gets at least two adequate and wholesome meals a day, but also has access to all the basic amenities required to lead a modestly comfortable life with dignity. The present inadequate definition of poverty has ensured that all the policies aimed at alleviating poverty aim much too low by focusing on eliminating hunger rather than eliminating poverty as a whole.

Table 4: Estimates of Calorie Intake and Required Monthly Per Capita Expenditure, 2004-05 (All India Rural)

Direct estimates				
Levels of Calorie Intake per Day	2400	2200	2100	1800
Required Monthly Per Capita Expenditure in 2004-05 to Access Nutrition Level, Rs.	795	575	515	342
Percent of Persons below Specified Nutrition Level, 2004-05	87.0	69.5	60.5	25.0
Percent of Persons below Specified Nutrition Level, 1993-94	74.5	58.5	49.5	20.0
Official Estimate of Poverty Line	**1993-94**	**2004-05**		
Official Poverty Line (Rs.)	**206**	**356**		
Percent of People below OPL	**37.3**	**28.5**		
Calorie Intake at OPL	**1980**	**1820**		

Source: Patnaik, 2008.

Further, the current caloric standard is also an insufficient nutritional norm. Firstly, the caloric standard set by the Planning Commission is a glaring under-stipulation. The Indian Council of Medical Research (ICMR, 2003, 2004) prescribes 3,800 calories for an adult male doing heavy activity and 2,925 calories for an adult female carrying out heavy activity. This makes it clear that for the millions of poor unskilled wage laborers in India who do heavy manual labour every day, a stipulation of 2,100-2,400 calories in urban and rural areas is grossly insufficient.

4.2. Malnutrition and Decline in per capita availability of Food grain

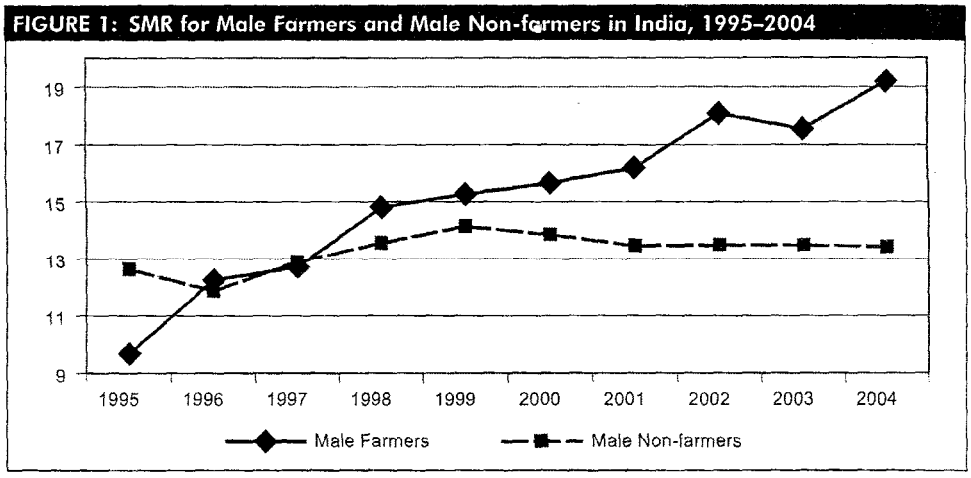
Further, incidence of malnutrition is widespread in India. This is stark in terms of statistics on the level of malnutrition among women and children. According to the UN Report of 2004 (Fifth Report on the World Nutrition Situation), the proportion of underweight children in India are placed at 47 per cent as compared to 28 per cent in Asia; 45 per cent children in India are stunted as compared to 30 per cent in Asia and 16 per cent are wasted as compared to 9 per cent in Asia. The levels of undernourishment also vary widely across Indian states. The proportion of underweight children varies, for instance, from less than 30 per cent in Punjab, Kerala and Jammu and Kashmir to over 50 per cent of children in Chhattisgarh, Bihar, Jharkhand and Madhya Pradesh. The proportion of stunted children is the lowest in Kerala (21 per cent), Tamil Nadu (25 per cent) and Himachal Pradesh (27 per cent) and the highest in Gujarat and Bihar (both 42 per cent), Chhattisgarh (45 per cent) and Uttar Pradesh (46 per cent). The extent of wasting among children is the least in Punjab (9 per cent), Andhra Pradesh and Assam (both 13 per cent) and Uttar Pradesh (14 per cent) whereas it is maximum in Bihar (28 per cent), Jharkhand (31 per cent) and Madhya Pradesh (33 per cent).

4.3. Farmers' Suicides

An extreme manifestation of agrarian distress is the sharp rise in farmers' suicides in recent years. A stunning portrayal is given by Sainath (2007): "On average, one Indian farmer committed suicide every 32 minutes between 1997 and 2005. Since 2002, that has become one suicide every 30 minutes. …….". On average, one farmer took his or her life every 53 minutes between 1997 and 2005, in just the states of Maharashtra, Andhra Pradesh, Karnataka and Madhya Pradesh (including Chhattisgarh). In Maharashtra alone, that was one suicide every three hours. It got even worse after 2001. It rose to one farm suicide every 48 minutes in these Big Four States, and one every two and a quarter hours in Maharashtra alone. The Big Four have together seen 89,362 farmers' suicides between 1997 and 2005, or 44, 102 between 2002 and 2005."[11]

Figure 4

SMR for Male Farmers and Male Non-Farmers in India, 1995-2005



Source: Mishra (2007).

Analysis of suicides in Maharashtra assigns key role to failure to repay loans because of crop failure[12]. In fact, those who committed suicides had higher outstanding

[11] Generally, the Gangetic plain region and eastern India have seen fewer farm suicides. Specifically, Uttar Pradesh (UP including Uttaranchal), Bihar (including Jharkhand) and Orissa report very few suicides. Sainath (2007) points out that these are overwhelmingly food producing areas, not-so-input intensive and are less water scarce.

[12] Mitra and Shroff (2007), state that the loss in competitiveness of the Indian Cotton farmer after the opening up of India's agricultural economy in the mid 1990's was a major reason for the increase in farmer's suicides. They link the surge in suicides in Maharashtra after 2004-from 10 in 2004 to 24.37 in 2006- to widespread adoption of Bt cotton and the price and yield risks associated with it. In fact, the SMR climbed to 134 in Vidarbha (a region in Maharashtra where the area under Bt cotton rose from 0.4 per cent of total area to 15 per cent in 2005-06. Whether this constitutes a case against genetically modified crops is not self-evident as the effects of variability of yields and prices get magnified in the absence of insurance and credit markets.

amounts of credit even after normalizing for land and household size, relative to the non-suicide control group. Also, the former had a lower asset base and lower income because of lower returns from cultivation but higher family size. In fact, there is a multiplicity of risks relating to the weather, markets and technology and their interactions that lead to suicides (Mishra, 2007). Short-term relief measures initiated by the central and state governments may alleviate the distress of a small segment of the population but is unlikely to make a significant dent.

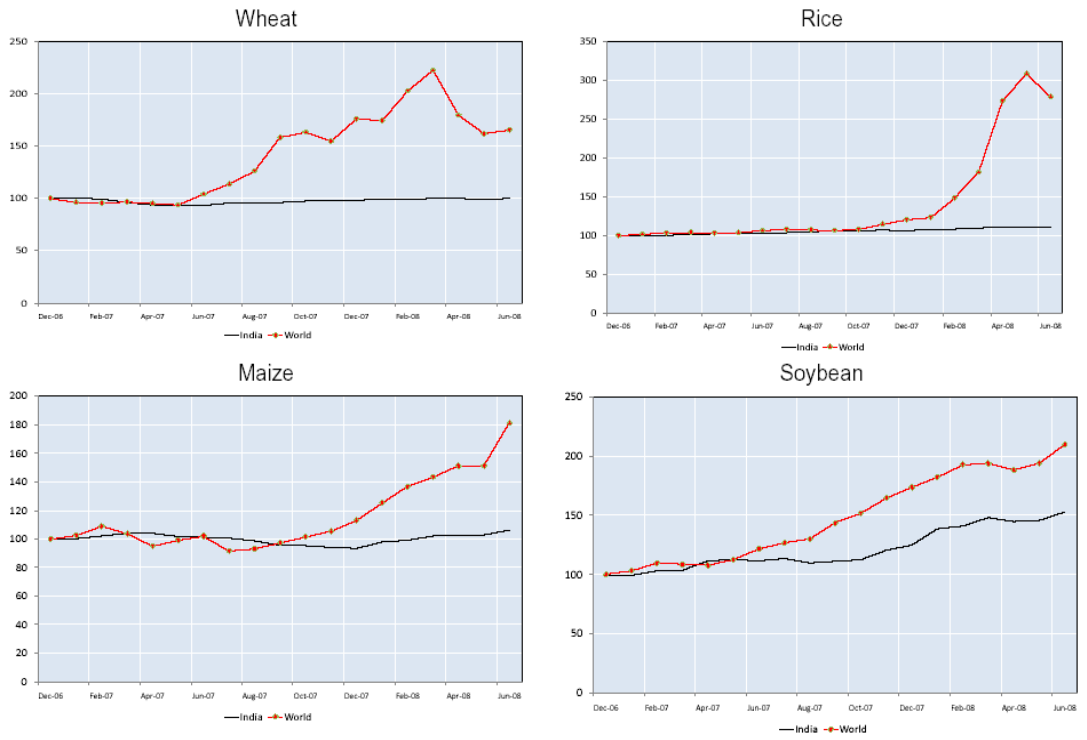
5. Safety Nets in India

Subsidies: Subsidies introduce inefficiencies, and these increase exponentially with subsidy levels. Therefore, universal subsidies can be a very costly and inefficient way of transferring income to the poor, even when they target the right commodities. When financed through low producer prices, they can lead to large production inefficiencies, especially in agriculture.

Universal Food Subsidies: India has a long history of providing universal food subsidies. This the government has been doing by reimbursing the Food Corporation of India the difference between its procurement costs from producers and the issue price to consumers. Over time as the economic cost of major grains such as wheat and rice has gone up due to an increase in the minimum support price, the issue price has been kept unchanged since July 1, 2002. Further, as the international economies were experiencing rising prices, the issue price of food grains such as wheat, rice, maize and soybeans did not experience commensurate increase. Figure 5 is an illustration of this kind of universal food subsidy that led to the isolation of domestic wholesale prices from international price movements.

Figure 5: Universal Food Subsidy in India

Figure 5.6. The evolution of India's monthly wholesale prices for wheat, rice, maize and soybeans compared to the evolution of world market prices, December 2006 = 100, 2007/08



Domestic prices refer to the national wholesale prices; for international prices: wheat is US HRW price; white rice is Thai 100% B second grade, f.o.b. Bangkok; Corn (US), no. 2, yellow, f.o.b. US Gulf ports; soybeans (US), c.i.f. Rotterdam.

Source: http://eaindustry.nic.in/ and World Bank Commodity Price Data, September 2008.

Rationed Food Subsidies: Distribution of subsidised food to poor consumers is at the core of India's food security system. It is operated through the **Indian Targeted Public Distribution System (TPDS)** and managed by the Food Corporation of India (FCI), which is also responsible for procurement and buffer stocks. With a network of around 478 000 Fair Price Shops distributing food to about 160 million families, the TPDS is the largest distribution network of its kind in the world. Major commodities distributed include wheat, rice, coarse grains, sugar and kerosene. While the economic cost of wheat and rice has gone up due to an increase in minimum support prices, the issue price has been kept unchanged since July 1, 2002. This has led to rising food subsidies (refer Table 5). The subsidies involved have, however, grown rapidly and contributed in large measure to fiscal stress in recent years. Moreover, the (direct) benefits of the subsidies have accrued mostly to large farmers in a few of the major wheat and rice producing states. Not only is the targeting of subsidised food through the Public

Distribution System (PDS) a continuing concern, it is also far from a cost-effective way of transferring food/real income to the poor[13].

Table 5: Food Subsidy in India and its Growth

Year	Food Subsidy (Rs. Crore)	Annual Growth (%)
1997-98	7500	45.2
1998-99	8700	16
1999-00	9200	5.8
2000-01	12010	30.5
2001-02	17494	45.7
2002-03	24176	38.2
2003-04	25160	4.1
2004-05	25746	2.3
2005-06	23071	-10.4
2006-07	23828	3.3
2007-08(BE)	25425	6.7

Source: Government of India, Economic Survey, 2007-08

On September 16, 2007 food riots occurred in West Bengal state in India over shortage of food and wide spread corruption in public distribution system. The riots initially occurred in Burdwan, Bankura and Birbhum districts but later spread to other districts[14]. Police shot and killed three villagers during the riots and more than 300 villagers were injured in riots. At least three ration distributors committed suicide. The state government took damage-control measures and suspended 113 dealers and served show-cause notices to 37 food inspectors.

The State of India's Public Service, a report based on a study conducted by the Centre of Public Affairs (April 2002) covering the administration of PDS in 24 Indian states, among other things, lists Tamil Nadu at the top while Arunachal Pradesh is at the bottom of the pile. West Bengal ranks a poor 17. How much is being distributed among the target groups in Bengal? Table 6 is a brief indication.

[13] A not-so-recent but detailed analysis of the PDS in Andhra Pradesh, for example, shows that when both central and state expenses are accounted for, a rupee of income transferred to the poor cost Rs 6.35. If it was as dismal as this in Andhra Pradesh with a relatively efficient administration, it is likely to be much worse in other states such as Uttar Pradesh and Bihar. For details, see Radhakrishna et al. (1997), and for a review of this and other estimates, see Gaiha (1999, 2002, 2003).

[14] That morning few CPI (M) leaders were lecturing the villagers on the dangers of the Indo-US nuclear agreement. They were shouted down and asked to provide foodgrains by the villagers. When CPI (M) leaders tried to shoo them away the angry villagers beat CPI-M leaders and burnt their flags. The police opened fire to quell the mob. This news of the protest and firing spread and within a day the people across the state came out against corrupt ration dealers and party leaders. Subsequently hundreds of ration shop owners were attacked and their shops and houses looted. At many places, CPI (M) leaders born the brunt of public anger (from Wikipedia).

Table 6: Effectiveness of PDS

	National Average	West Bengal	Bihar
Legitimate Fair Price shops within 1 km of residence	60%	64%	56%
People who get their rations regularly	23%	9%	10%
People who get the right quantity	8%	2%	6%
People who get the right quality	9%	1%	14%

http://www.indiatogether.org/2007/oct/gov-wbpds.htm

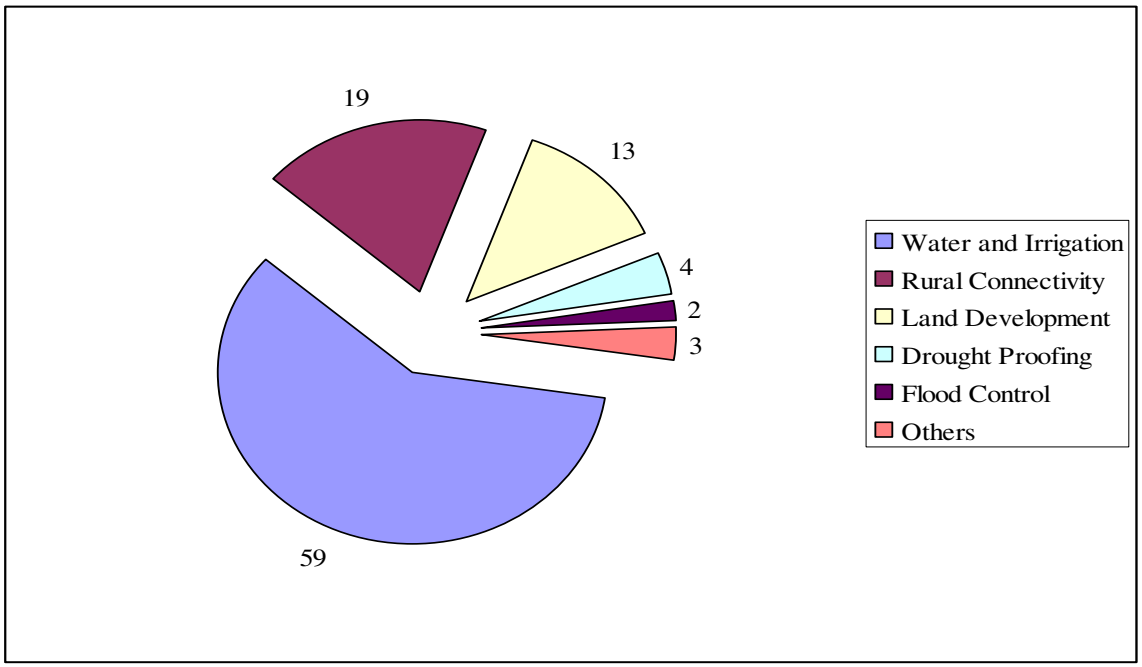
National Rural Employment Guarantee Act (NREGA): The Indian Parliament passed the NREGA in the monsoon session in 2005. Some of the features that give the National Rural Employment Guarantee Scheme (NREGS) a distinct character are:

1. Legal entitlement to 100 days of employment at minimum wages to every rural household, with a provision to earmark one-third of employment to women workers;
2. minimum wages not to be less than Rs 60;
3. Unemployment allowance in case of the inability of the implementing agency to provide job on demand.
4. centre-sponsored scheme; however, state governments will meet the cost of unemployment allowance; one-fourth of the material components, one-fourth of the wages of skilled and semi-skilled workers, and expenditure of the State Employment Council;
5. 60 per cent of the project cost to be spent on wages of unskilled workers and 40 per cent on wages of skilled and semi-skilled workers and material;
6. social auditing of the scheme;
7. transparency, accountability, and provision of penalty;
8. emphasis on schemes of water conservation, drought proofing, irrigation facilities, and 1and development;
9. no contractors, and as far as possible no use of machines;
10. workers' entitlement to four facilities at work (a) drinking water; (b) shelter; (c) first aid; and crèche for children below 6 years of female workers;
11. a three-tier grievance-redressal mechanisms.

The extent of job card registration across states shows that a total of 62,311,802 persons have been registered for job cards so far from 24,632,800 households. Assuming that only the very poor are seeking registration, 28.2 per cent of the total poor below the poverty line have applied for job cards. However, in some states the number of those registered as percentage of the very poor is relatively high. For example, it is 75 per cent

in Chhattisgarh, 58 per cent in West Bengal, 51 per cent in Rajasthan, 43.9 per cent in Jharkhand, and 40 per cent in Maharashtra. But in Madhya Pradesh and Tripura people registered for a job card have outnumbered those below the poverty line. This suggests that the number of households seeking livelihood security and demanding wage employment under the NREGA will exceed the number of BPL households.

Figure 6: Distribution of Schemes Completed, 2007-08



The NREGA prescribes that out of total available funds under the NREGS, 60 per cent should be spent on the wages of unskilled workers, and 40 per cent on the wages of skilled/semi-skilled workers and marerial. This distribution is, however, meant for total available funds and not for each scheme. The distribution has been prescribed keeping in mind the priority given to the creation of wage employment largely through schemes that are labour intensive (kacha work) like water conservation and harvesting. The distribution of expenditure on wages and material varies across states. Though most states followed the expenditure distribution guidelines, there are some that spent relatively large sums on the wages of unskilled manual workers, and some less on the same. States that spent relatively more on the wages of unskilled manual workers are: Arunachal Pradesh (98.90 per cent), Tamil Nadu (96.47 per cent), Maharashtra (94.60 cent), Kerala (88.71 per cent), and Andhra Pradesh (85.89 per cent)

Bharat Nirman (2005-09): The total cost of INR 1 740 billion (USD 41 billion)

Specific targets include:

- Irrigation - to create 10 million hectares of additional irrigation capacity.

- Rural roads - to connect all remaining habitations with population above 1 000 (500 in hilly and tribal areas) with all weather roads.
- Rural housing - to construct 6 million houses for rural poor.
- Rural drinking water - to provide potable water to all uncovered habitations and to provide safe water to all water-quality-affected habitations.
- Rural electrification - to provide electricity to all un-electrified villages and to connect 23 million households below the poverty line.
- Rural telephony - to connect all remaining villages with a public telephone system

Progress in implementation of the programme is regularly posted on the website for the programme. In the first two years of implementation (2005-07) performance was rather mixed with a rather good progress in meeting housing targets but an important shortfall was noted in assisting the water quality- affected habitations (Planning Commission, 2008).

Assessment: Policy Implication

Public investments affect rural poverty through many channels. For example, public investment in agricultural research, rural education, and infrastructure increases farmers' income directly by increasing agricultural productivity, which in turn reduces rural poverty. Indirect impacts come from the higher agricultural wages and improved nonfarm employment opportunities induced by growth in agricultural productivity. Agricultural output from rural investment often yields lower food prices, again helping the poor indirectly because they are often net buyers of food grains. Further, improved infrastructure access helps farmers set up small rural nonfarm businesses such as food processing and marketing enterprises, electronic repairs shops, transportation and trade businesses, and restaurant services. Understanding these different effects provides useful policy insights to improve the effectiveness of national poverty reduction strategies. In particular, it provides information on how public investment can be used to strengthen weak links between poverty reduction channels to increase the efficiency of targeting public resources for poverty reduction.

Fan, Hazell, and Thorat (2000) used the system of econometric equations to identify the relative roles of different forms of government spending in agricultural growth and rural poverty reduction in India using state-level data from 1970 to 1993. The model was structured to enable identification of the various channels through which different types of government expenditures affect the poor. The study also distinguished between direct and indirect effects. The direct effects arise in the form of benefits the poor receive from employment programs directly targeted to the rural poor. The indirect effects arise when government investments in rural infrastructure, agricultural research, health, and the education of rural people stimulate agricultural and nonagricultural growth, leading to greater employment, more income-earning opportunities, and less expensive food for the poor.

The results from the model show that additional government expenditures on roads have the largest impact on poverty reduction as well as a significant impact on

productivity growth (Table 7). For every 1 million rupees spent on rural roads, 124 poor are lifted above the poverty line, the largest amount of poverty reduction among all types of investment. One rupee invested in rural roads generates more than 5 rupees in returns in agricultural production, the second-largest production growth effect, following only agricultural R&D. Therefore, government investment in roads is a dominant "win-win" strategy. Additional government spending on agricultural research and extension is another dominant win-win strategy. Additional government spending on education has the third-largest impact on rural poverty reduction, largely as a result of the increases in nonfarm employment and rural wages that it induces. Additional irrigation investment has an impact similar to that of education investment on growth in agricultural productivity but only a small impact on rural poverty reduction, even after trickle-down benefits have been allowed for. Additional government spending on rural and community development, including integrated rural development programs, contributes to the reduction in rural poverty, but its impact is smaller than that of expenditures on roads, agricultural R&D, and education. Additional government expenditures on soil and water conservation and health have no impact on productivity growth, and their poverty effects through employment generation and increased wages are also small.

Table 7: Impact of Government Expenditure on Poverty Reduction and Productivity Growth

TABLE 3.2 Returns to agricultural research in India, state-level analysis, 1993

	Returns in rupees per rupee spending	No. of poor reduced per million rupees' spending
R&D	13.45	84.5
Irrigation	1.36	9.7
Roads	5.31	123.8
Education	1.39	41.0
Power	0.26	3.8
Soil and water conservation	0.96	22.6
Health	0.84	25.5
Antipoverty programs	1.09	17.8

SOURCE: Calculated by the authors from Fan, Hazell, and Thorat (2000).

Because significant increases in public rural investment seem unlikely, countries will have to give greater emphasis to using their public investment resources more efficiently. This will require better targeting of investments to achieve growth and poverty alleviation goals, as well as improved efficiency within the agencies that provide public goods and services. Existing literature (most provided by IFPRI) offers some important lessons:

1. Returns to public investments vary drastically across different types of investment and regions, even within the same country. This implies that there is a great potential for more growth and poverty reduction even with the same amount of investment if these public resources can be allocated optimally.
2. Various studies concluded that agricultural research, education, and rural infrastructure are the three types of public spending that are most effective in promoting agricultural growth and poverty reduction (Table 3.6).

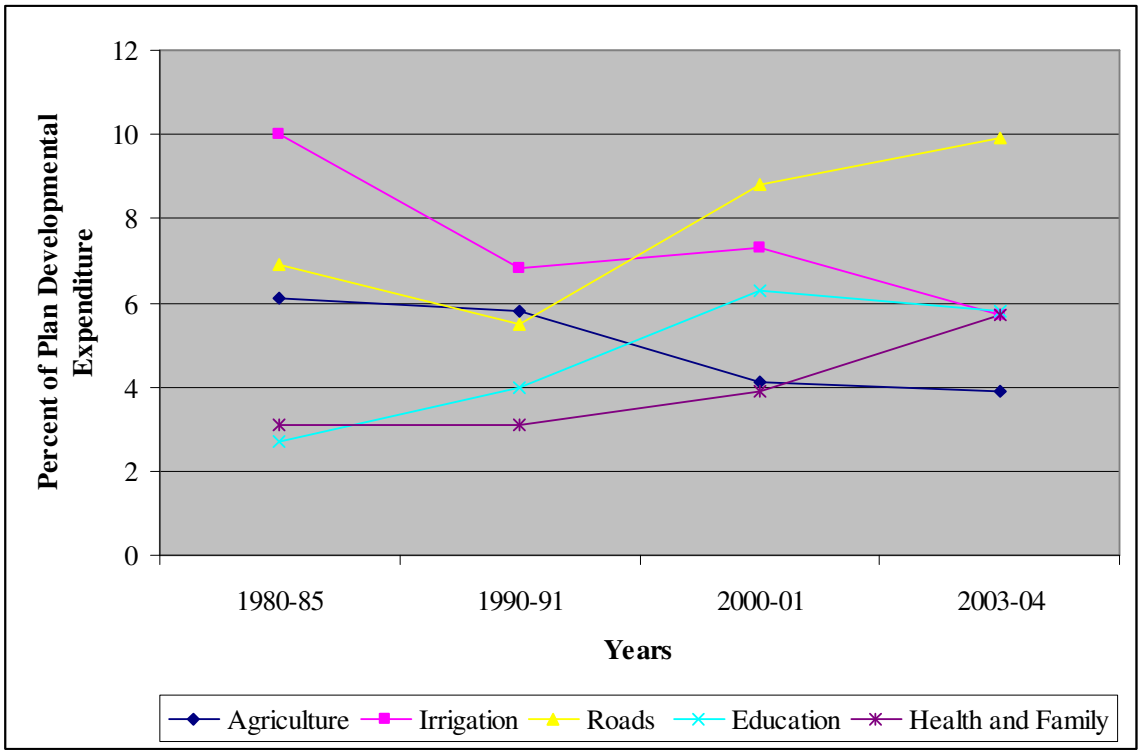
3. The trade-off between agricultural growth and poverty reduction is generally small among different types of investments and between regions. Agricultural research, education, and infrastructure development have large impacts on growth as well as poverty reduction. Regional analyses conducted for China and India suggest that more investments in many less developed areas not only offer the largest amount of poverty reduction per unit of spending, but also lead to the highest economic returns.
4. Government spending on antipoverty programs generally has a small impact on poverty reduction, mainly due to inefficiency in its targeting and misuse of the funds. Although many governments have realized the seriousness of the problem, more efforts are needed to better target the funds to the poor or otherwise to use the investments to improve rural education and infrastructure, which promote long-term growth and thereby offer a long-term solution to poverty.
5. Government spending in irrigation played an important role in promoting agricultural growth and poverty reduction in the past. But today this type of spending has smaller marginal returns in terms of both growth and poverty reduction for many Asian countries. Increased investment in irrigation should be replaced by increasing the efficiency of current public irrigation systems.

Table 8: Public investment and poverty reduction in India, China, Thailand and Uganda

Type of public investment	India 1993	China 2000	Thailand 1999	Uganda 1999	India 1993	China 2000	Thailand 1999	Uganda 1999
	Ranking of returns to Poverty Reduction				Ranking of returns to Agricultural Production			
Roads	1	3	3	2	2	3	4	2
Agricultural R&D	2	2	2	1	1	1	1	1
Education	3	1	4	3	3	2	3	3
Antipoverty Programs	4	7			5			
Soil and Water Conservations	5				6			
Health	6			4	7			4
Irrigation	7	6	5		4	5	5	
Electricity	8	4	1		8	6	2	
Telecommunications		5				4		

SOURCES: Fan, Hazell, and Thorat (2000); Fan, Jitsuchon, and Methakunnavut (2004); Fan, Zhang, and Rao (2004); and Fan, Zhang, and Zhang (2004)

Figure 7: Plan Outlay by Heads of Development: Centre, States and Union Territories of India (1980-2004)

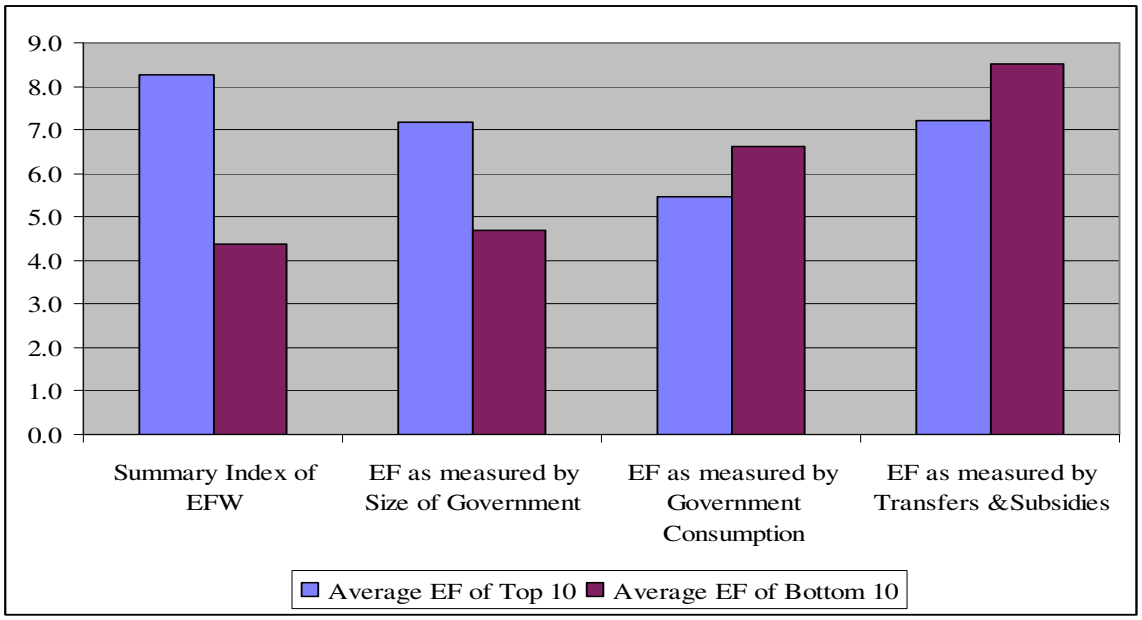


We now analyze the economic freedom of the top 10 and bottom 10 countries with respect to their size of governments (Table 9). EF associated with *government consumption expenditure* and *transfers and subsidies* as a measure of public intervention is presented in Figure 8. The data is for the year 2005, the most recent year for which comprehensive data are available (Gwartney and Lawson, 2007). Hong Kong and Singapore occupy the top two positions in terms of EFI. The other nations in the top 10 are New Zealand, Switzerland, United Kingdom, United States, Canada, Ireland, and Luxembourg. At the bottom of the list are countries such as Venezuela, the Republic of Congo, Myanmar and Zimbabwe

Table 9: EF associated with *government consumption expenditure* and *transfers and subsidies* for the Top 10 and Bottom 10 Economically Free Nations

	Summary Index of EFW	EF as measured by Size of Government	EF as measured by Government Consumption	EF as measured by Transfers & Subsidies
Average EF of Top 10	8.3	7.2	5.5	7.2
Average EF of Bottom 10	4.4	4.7	6.6	8.5

Figure 8: Economic Freedom of Top 10 and Bottom 10 Economically Free Nations (Select EF Indicators)



Few interesting patterns emerge from the analysis of Figure 8. They are:

- The average of the top 10 economically free countries reveals that these economies are not very free in terms of size of government, with an average EFI rating of 7.2 in this area, as compared to the composite EFI of 8.3. On the other hand, the bottom 10 countries have a greater economic freedom with respect to size of the government as compared to the overall EFI.
- The bottom 10 countries have economic freedom that is half of the EF as enjoyed by the top 10 countries (4.4 for bottom 10 as against 8.3 for the top 10). However, surprisingly, in respect to economic freedom related to the size of the government as measured by two of its sub components viz. *government consumption expenditure* and *Transfers and Subsidies* (T&S), they have higher EF (at 6.6 and 8.5 respectively in 2005) than the top 10 countries (EF at 5.5 and 7.2 respectively in 2005). This implies that the bottom 10 countries have a relatively greater economic freedom as measured by these two components of *size of government*.

However, this result should be interpreted with caution, as it could be misleading. The smaller size is because these countries do not have large welfare programs or large transfer payments. This reduces the size of the government substantially. In countries such as Myanmar, Zimbabwe, Niger, Togo, Rwanda, Burundi, Democratic Republic of Congo and Republic of Congo public interventions are low. Based on the evidence of this paper, this has serious implications for provision of larger freedoms.

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